

WHAT IS CLAIMED IS:

1. A pneumatic tire comprising,
a mark portion which changes a surface shape thereof as wear progresses, said mark portion being provided on a portion of a tread surface of said tire.
2. The pneumatic tire according to claim 1,
wherein said mark portion is a thin groove, and
said thin groove is formed so as to change a cross sectional shape thereof in a depth direction from said tread surface.
3. The pneumatic tire according to claim 2, wherein wall surfaces of said thin groove are colored with a different color from that of surrounding rubber.
4. The pneumatic tire according to claim 2, wherein a colored member of a different color from that of surrounding rubber is buried in said thin groove.
5. The pneumatic tire according to any one of claims 1 to 4, wherein said mark portion is provided adjacent to a main groove of said tire.
6. The pneumatic tire according to any one of claims 2 to 4,
wherein a surface shape of said thin groove is a quadrilateral having two pairs of opposite sides of respectively the same length, and
one of said two pairs of the sides is made constant in the depth direction from said tread surface, and the other pair is made to change in the depth direction from said tread surface.
7. A measuring method of a tread wear amount of a pneumatic tire, comprising the steps of:
using the pneumatic tire in which a mark portion is formed on a part of

a tread surface, the mark portion changing a surface shape thereof as wear progresses;

detecting image data of said mark portion of said pneumatic tire with optical detecting means;

inputting said image data to processor means; and

determining said wear amount by comparing said image data with ratio referential data of said mark portion by said processor means, said ratio referential data being inputted in advance and corresponding to the wear amounts of the tread surface.

8. The measuring method of a tread wear amount of a pneumatic tire according to claim 7,

wherein said mark portion is a thin groove, and

said thin groove is formed so as to change a cross sectional shape thereof in a depth direction from said tread surface.

9. The measuring method of a tread wear amount of a pneumatic tire according to claim 8, wherein wall surfaces of said thin groove are colored with a different color from that of surrounding rubber.

10. The measuring method of a tread wear amount of a pneumatic tire according to claim 8, wherein a colored member of a different color from that of surrounding rubber is buried in said thin groove.

11. The measuring method of a tread wear amount of a pneumatic tire according to any one of claims 7 to 10, wherein said mark portion is provided adjacent to a main groove of said tire.

12. The measuring method of a tread wear amount of a pneumatic tire according to any one of claims 8 to 10,

wherein a surface shape of said thin groove is a quadrilateral having two pairs of opposite sides of respectively the same length, and

one of said two pairs of the opposite sides is made constant in the depth direction from said tread surface, and the other pair is made to change in the depth direction from said tread surface.

13. A measuring method of a tread wear amount of a pneumatic tire, comprising the steps of:

using the pneumatic tire in which a mark portion is formed on a part of a tread surface, the mark portion changing a surface shape thereof as wear progresses;

detecting image data of said mark portion of said pneumatic tire with optical detecting means;

inputting said image data to processor means; and

determining said wear amount by said processor means by use of said image data and a formula inputted in advance for computing the wear amount, the formula expressing a relation between the wear amount of the tread surface and a change of the surface shape of said mark portion.

14. The measuring method of a tread wear amount of a pneumatic tire according to claim 13,

wherein said mark portion is a thin groove, and

said thin groove is formed so as to change a cross sectional shape thereof in a depth direction from said tread surface.

15. The measuring method of a tread wear amount of a pneumatic tire according to claim 14, wherein wall surfaces of said thin groove are colored with a different color from that of surrounding rubber.

16. The measuring method of a tread wear amount of a pneumatic tire according to claim 14, wherein a colored member of a different color from that of surrounding rubber is buried in said thin groove.

17. The measuring method of a tread wear amount of a pneumatic tire according to any one of claims 13 to 16, wherein said mark portion is provided adjacent to a main groove of said tire.

18. The measuring method of a tread wear amount of a pneumatic tire according to any one of claims 14 to 16,

wherein a surface shape of said thin groove is a quadrilateral having two pairs of opposite sides of respectively the same length, and

one of said two pairs of the opposite sides is made constant in the depth direction from said tread surface, and the other pair is made to change in the depth direction from said tread surface.